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| 10/840,053   | 05/06/2004  | Anand S. Bedekar     | CE10624R            | 6638             |
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| MOTOROLA, INC.<br>1303 EAST ALGONQUIN ROAD<br>IL01/3RD<br>SCHAUMBURG, IL 60196 |             |                      | TAHA, SHAQ          |                  |
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

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Docketing.US@motorola.com

### Office Action Summary

**Application No.**

10/840,053

**Applicant(s)**

BEDEKAR ET AL.

**Examiner**

SHAQ TAHA

**Art Unit**

2446

**Period for Reply** -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 29 September 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1 - 13, and 16 - 20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1 - 13, and 16 - 20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 08/03/2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

### **DETAILED ACTION**

This is a Non-Final action for application number 10/840,053 based on after Request for continued examination filed on 09/29/2008. The original application was filed on 05/06/2004. Claims 1 – 13, and 16 – 20 are currently pending and have been considered below. Claims 1 and 13 are independent claims. Claims 14 and 15 are cancelled.

### **Response to Arguments**

Applicant's arguments with respect to claims 1 – 13, and 16 – 20 have been considered but are moot in view of the new ground(s) of rejection.

### **Claim Rejections - 35 USC § 103**

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 2, 4, 5, 7, 8, 9, 11, 12, 13, and 16 - 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ramasubramani et al. (US 6,314,108) in view of Allred et al. (US 2004/0044771).

Regarding claim 1, a proxy within a network for use in facilitating access with a distributed network, the apparatus comprising: a plurality of persistent connections between the proxy and one or more servers in the network wherein the persistent connections is an active and established connection between the proxy and the server, **[Fig. 9, Ref # 920 and 926 are persistent connection in communication system 900 wherein the carrier network A 920 then forwards the request to the SMSC-A 918. The request is then forwarded by the SMSC-A 918 to the protocol adapter (PA-A) 912, (Ramasubramani et al., Col. 13, lines 34-40)],**

a controller that controls communications over the persistent connections, **[The NB-router 906 also includes a route table 916 that associates a port number to each of the air links in the push agent 902 and the pull agent 904, wherein the router is the controller that controls the connection, (Ramasubramani et al., Col. 12, lines 55-60)],**

communication ports coupled with the persistent connections, **[Fig. 9, Ref # 918 and 924 are communication ports coupled with persistent connections 920 and 926, wherein the communication system 900 includes a push agent 902, a pull agent 904 and a NB-router 906. The pull agent 902 includes an air link-NBR-A 908 and an air link-NBR-B 910, (Ramasubramani et al., Col. 12, lines 50-55)],**

where at least one of the communication ports receive requests for objects from users wherein the objects are from the one or more servers, **[The pull agent operates to receive information requests for information from the Internet from particular**

**ones of the wireless communications devices, (Ramasubramani et al., Col. 3, lines 8 – 13)],**

wherein the controller controls communications over the persistent connections, **[The NB-router 906 also includes a route table 916 that associates a port number to each of the air links in the push agent 902 and the pull agent 904, (Ramasubramani et al., Col. 12, lines 50-55)],**

allocates the requests to the plurality of persistent connections for transmission to the one or more servers, **[The route table 916 can also associate each connection with the same port, Using the route table 916, the NB-router 906 can route information between the appropriate air links and the SMSC units, (Ramasubramani et al., Col. 12, lines 50-60)],**

receives the requested objects over the plurality of persistent connections, **[The NB-router 906 also includes a route table 916 that associates a port number to each of the air links in the push agent 902 and the pull agent 904, wherein the controller receives the requests and then delivers it to the user, (Ramasubramani et al., Col. 12, lines 50-55)],**

and orders delivery of the objects received from the one or more servers to the users, **[The route table 916 can also associate each connection with the same port, Using the route table 916, the NB-router 906 can route information between the appropriate air links and the SMSC units, wherein the controller receives requested objects and then forwards the received object to the user or agent, (Ramasubramani et al., Col. 12, lines 50-60)],**

Ramasubramani et al. doesn't explicitly teach that the persistent connections is an active and established connection between the proxy and the server,

Allred et al. teaches a persistent connection between the client and the server, the server can initiate transactions whenever necessary, and the client can also initiate transactions over the same connection, **(Alredd et al., Paragraph 5)**, in order to the client and the server to communicate with each other, **(Alredd et al., Paragraph 3)**,

It would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify Ramasubramani et al. by including active persistent connections between the proxy and the server wherein Allred et al. teaches a persistent connection between the client and the server, the server can initiate transactions whenever necessary, and the client can also initiate transactions over the same connection, **(Alredd et al., Paragraph 5)**, in order to the client and the server to communicate with each other, **(Alredd et al., Paragraph 3)**.

Regarding claim 2, the proxy of claim 1, wherein the controller dynamically adjusts the number of persistent connections between the apparatus and a first server of the one or more servers in the network, **[Fig. 2, Ref # 214, 216, The Multi-network gateway that controls the connections to the internet 214, and servers 218, and 220]**

Regarding claim 4, the proxy of claim 2, wherein the controller activates an additional persistent connection when an additional request is received for a second

server of the one or more servers and existing plurality of one or more persistent connections are not idle, **[The air link enable is used to indicate whether or not a particular air link should be activated during initialization of the multi-network gateway, (Ramasubramani et al., Col. 7, lines 52-56)],**

and allocates the additional request to the additional persistent connection for transmission to the second server, **[The route table 916 can also associate each connection with the same port, Using the route table 916, the NB-router 906 can route information between the appropriate air links and the SMSC units, wherein the controller receives requested objects and then forwards the received object to the user or agent, (Ramasubramani et al., Col. 12, lines 50-60)].**

Regarding claim 5, the proxy of claim 2, wherein more than one persistent connection between the apparatus and a third server of the one or more servers exists, **Fig. 9, Ref # 920 and 926 are persistent connection in communication system 900]**, and the controller allocates the requests plurality of for the third server to one or more persistent connections persistent connections to the third server such that the requests are routed transmitted to the third server over the persistent connections having lightest loads, **[The route table 916 can also associate each connection with the same port, Using the route table 916, the NB-router 906 can route information between the appropriate air links and the SMSC units, wherein the controller receives requested objects and then forwards the received object to the user or**

**agent, (Ramasubramani et al., Col. 12, lines 50-60)].**

Regarding claim 7, the proxy of claim 1, further comprising: a load tracker coupled with at least one of the communication ports, **[Fig. 9, Ref # 906, where the router plays the role of a load tracker];**

where the load tracker identifies which of the plurality of persistent connections to a fourth server has a lightest load when more than one persistent connection exists between the apparatus and the fourth server, **[Fig. 9, Ref # 906, where the router connects the connections and checks their load];**

wherein the controller communicates with the load tracker and allocates a request a for transmission to the fourth server over a persistent connection having the lightest load according to the load tracker, **[Fig. 9, Ref # 906, which is a router that routs communication and request].**

Regarding claim 8, the proxy of claim 1, wherein the controller tracks priorities of the received requests and delivers the objects to the requesting user in the order of the priority, **[Fig. 5B, Ref # 556], [Fig. 5B, Ref # 554].**

Regarding claim 9, a system for use in communicating data with devices, the system comprising: a proxy comprising: a controller providing at least some control of the proxy, **[Fig. 3, Ref # 302, 304 are Push and Pull Agents to control the Proxy];**



and a memory coupled with the controller, the memory comprises a cache that stores data, **[Fig. 12A, Ref # 1210, where storing the package in a session data which is memory];**

and a plurality of persistent connections coupled with the proxy, where the plurality of persistent connections are connections between the proxy and one or more servers over a distributed network that are activated and maintained by the proxy, **[Fig. 6, Connections between Ref # 602 & 208, between # 602 & 216 are persistent connections];**

and a load tracker coupled with the controller, wherein the load tracker provides information to the controller on the load on the persistent connections, **[Fig. 8B, Ref # 852, which is an Air link Framework that works as a load tracker for the controllers # 802, 804];**

Regarding claim 11, the system of claim 9, wherein the proxy further comprises a persistent connection controller coupled with the plurality of persistent connections such that when an additional request is received for an object on a second server to which there is one or more persistent connections, **[Fig. 2, Ref # 214, which is a gateway that has a controller that controls the communication over the connections];**

the persistent connection controller determines whether one or more of the persistent connections to the second server is idle and activates an additional persistent connection when an to the second server when no existing persistent connections to the second server are idle, **[The air link enable is used to indicate whether or not a**

**particular air link should be activated during initialization of the multi-network gateway, (Col. 7, line 53)].**

Regarding claim 12, the system of claim 9, wherein the proxy further comprises: an object identification evaluator coupled with the controller, the object identification evaluator identifies a user associated with a received object and a priority associated with the object, **[identifying an incoming request for data from the Internet from a first wireless communication device, (Column 3, line 24)];**

and en a priority-based object router coupled with the object identification evaluator, **[Fig. 9, Ref # 906];**

where the object router routes the received object to the user as identified by the object identification evaluator based on the priority of the object as identified by the objection identification evaluator, **[Fig. 9, Ref # 906, which is a router that routes requests]**

Regarding claim 13, a method for use in providing client devices with access to a distributed network, the method comprising: establishing a plurality of persistent connections between a proxy and a first server over a distributed network, **[Fig. 9, Ref # 920 and 926 are persistent connection in communication system 900 wherein the carrier network A 920 then forwards the request to the SMSC-A 918. The request is then forwarded by the SMSC-A 918 to the protocol adapter (PA-A) 912, (Ramasubramani et al., Col. 13, lines 34-40)],**

maintaining the plurality of persistent connections as active, **[Fig. 8A, Ref # 810, where the router maintains the requests],**

receiving a plurality of requests for objects on the first server, **[The NB-router 906 also includes a route table 916 that associates a port number to each of the air links in the push agent 902 and the pull agent 904, wherein the controller receives the requests and then delivers it to the user, (Ramasubramani et al., Col. 12, lines 50-55)],**

communicating the plurality of requests over the plurality of persistent connections, **[The route table 916 can also associate each connection with the same port, Using the route table 916, the NB-router 906 can route information between the appropriate air links and the SMSC units, (Ramasubramani et al., Col. 12, lines 50-60)],**

and where adjusting a number of persistent connections that are maintained as active to the first server, **[Fig. 2, Ref # 214, 216, The Multi-network gateway that controls the connections to the internet 214, and servers 218, and 220],**

Regarding claim 16, the method of claim 13, further comprising: monitoring a first persistent connection of the plurality of persistent connections,

and releasing the first persistent connection when the first persistent connection is idle for a predefined period of time, **[The route table 916 can also associate each connection with the same port. Using the route table 916, the NB-router 906 can**

**route information between the appropriate air links and the SMSC units, (Column 12, line 60)].**

Regarding claim 17, the method of claim 13, further comprising: receiving an additional request for an object on the first server, **[The air link enable is used to indicate whether or not a particular air link should be activated during initialization of the multi-network gateway, (Ramasubramani et al., Col. 7, lines 52-56)],**

determining loading on each of the existing persistent connections to the first server when there are one or more persistent connections to the first server, **[Fig. 8A, The processing load on the push agent 802 is reduced];**

determining when existing persistent connections to the first server are loaded beyond a threshold limit when receiving the additional request activating an additional persistent connection all of the existing persistent connections are loaded beyond a threshold limit, **[The air link enable is used to indicate whether or not a particular air link should be activated during initialization of the multi-network gateway, (Col. 7, line 53)],**

and communicating the additional request to the first server over the additional persistent connection, **[The route table 916 can also associate each connection with the same port, Using the route table 916, the NB-router 906 can route information between the appropriate air links and the SMSC units, (Ramasubramani et al., Col. 12, lines 50-60)].**

Regarding claim 18, the method of claim 13, further comprising: receiving a first object from the first server, **[The NB-router 906 also includes a route table 916 that associates a port number to each of the air links in the push agent 902 and the pull agent 904, wherein the controller receives the requests and then delivers it to the user, (Ramasubramani et al., Col. 12, lines 50-55)],**

determining that a third request is associated with the received first object, **[determining a first network driver within the network gateway that is associated with the first wireless communication device from a plurality of network drivers, (Ramasubramani et al., Col. 19, line 18)],**

and caching the first object when there is a fourth request for an object on the first server having a higher priority than the third request such that a second object is received that is associated with the fourth request having has not been received from the first server and delivering the first object with cached objects associated with requests having a lower priority than the third request when there are no requests with higher priority than the third request for which the objects have not been received, **[After receiving the package, the pull agent then stores 1210 the package in its session data. The session data is maintained by the pull agent to record state information associated with requests being processed by the pull agent, (Ramasubramani et al., Col. 15, lines 22-30)].**

Regarding claim 19, the method of claim 13, further comprising: receiving a third request for an object on the first server when one or more persistent connections are available to the first server, **[The NB-router 906 also includes a route table 916 that associates a port number to each of the air links in the push agent 902 and the pull agent 904, wherein the controller receives the requests and then delivers it to the user, (Ramasubramani et al., Col. 12, lines 50-55)],**

determining when one or more of the plurality of active persistent connections is to the first server idle, **[The route table 916 can also associate each connection with the same port, Using the route table 916, the NB-router 906 can route information between the appropriate air links and the SMSC units, wherein the controller receives requested objects and then forwards the received object to the user or agent, (Ramasubramani et al., Col. 12, lines 50-60)],**

and communicating the third request to the first server over an idle persistent connection when one or more of the plurality of active persistent connections is idle, **[The route table 916 can also associate each connection with the same port, Using the route table 916, the NB-router 906 can route information between the appropriate air links and the SMSC units, wherein the controller receives requested objects and then forwards the received object to the user or agent, (Ramasubramani et al., Col. 12, lines 50-60)].**

Regarding claim 20, the method of claim 13, further comprising: receiving an additional request for an object on the first server when one or more persistent

connections exist to the first server, **[The NB-router 906 also includes a route table 916 that associates a port number to each of the air links in the push agent 902 and the pull agent 904, wherein the controller receives the requests and then delivers it to the user, (Ramasubramani et al., Col. 12, lines 50-55)],**

determining which of the one or more of plurality of persistent connections has the lightest load, **[The route table 916 can also associate each connection with the same port, Using the route table 916, the NB-router 906 can route information between the appropriate air links and the SMSC units, wherein the controller receives requested objects and then forwards the received object to the user or agent, (Ramasubramani et al., Col. 12, lines 50-60)].**

and communicating the additional request to the first server over the persistent connection that has been determined to have with the lightest load, **[The route table 916 can also associate each connection with the same port, Using the route table 916, the NB-router 906 can route information between the appropriate air links and the SMSC units, wherein the controller receives requested objects and then forwards the received object to the user or agent, (Ramasubramani et al., Col. 12, lines 50-60)].**

Claims 3, 6, and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ramasubramani et al. (US 6,314,108) in view of Allred and further in view of Boucher et al. (US 7,167,926).

Regarding claims 3 and 10, the modified Ramasubramani teaches a network gateway (or proxy server) that provides access to a network of computers to various wireless network carriers having different wireless network characteristics, **(Ramasubramani et al., Col. 2, lines 27-33)**,

the modified Ramasubramani et al. fails to teach an idle timer that is coupled with a controller,  
Boucher teaches a device provides a fast-path that avoids protocol processing for most messages, greatly accelerating data transfer and offloading time-intensive processing tasks from the host CPU, **[Abstract]**.

Boucher teaches an idle timer coupled with the controller, **(Col. 67, line 60)**, in order to the activate the idle timer when a first persistent connection becomes idle, and terminates the first persistent connection when a predefined time period expires before a request for an object is communicated over the first persistent connections, where maintaining the idle timer means to activate it, **(Col. 67, line 59)**,

It would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify the modified Ramasubramani by including an idle timer wherein Boucher teaches an idle timer coupled with the controller, **(Col. 67, line 60)**, in order to the activate the idle timer when a first persistent connection becomes idle, and terminates the first persistent connection when a predefined time period expires before a request for an object is communicated over the first persistent connections, where maintaining the idle timer means to activate it, **(Col. 67, line 59)**.



Regarding claim 6, the modified Ramasubramani teaches a network gateway (or proxy server) that provides access to a network of computers to various wireless network carriers having different wireless network characteristics, **(Ramasubramani et al., Col. 2, lines 27-33)**,

The modified Ramasubramani et al. fails to teach a cache coupled with the communication ports

Boucher teaches that the apparatus further comprising: a cache coupled with the communication ports, where the CPU Cache is coupled with a communication, **(Col. 3, line 44)**, in order to a first received object is stored in the cache when a first request associated with the first object has a lower priority than a second request for a second object that has not been received, where the CPU Cache is a storage for instructions or data or requests, **(Col. 3, line 44)**,

It would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify the modified Ramasubramani by including a cache coupled with the communication ports, where the CPU Cache is coupled with a communication, **(Col. 3, line 44)**, in order to a first received object is stored in the cache when a first request associated with the first object has a lower priority than a second request for a second object that has not been received, where the CPU Cache is a storage for instructions or data or requests, **(Col. 3, line 44)**.

### **Conclusion**

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jeff Pwu can be reached on 571-272-6798.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for

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For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/S. T./

Examiner, Art Unit 2446

/Joseph E. Avellino/

Primary Examiner, Art Unit 2446